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ABSTRACT

Education for middle-level manpower, a high-priority need in Colombia, is discussed. The current programs of five educational agencies--universities, university institutes, SENA (National Apprentice Service), industrial schools, and agricultural schools--that are providing some preparation for middle-level manpower positions are described. A discussion is provided of the assets and problems of the university institutes, which are postsecondary educational institutions that offer programs, of up to 3 years, to prepare students for middle-level manpower positions. Recommendations for middle-level manpower education in Colombia, focused mainly on the university institutes, are made. Ten proposals for assisting middle-level manpower education in Colombia through USAID and other United States agencies are presented. Conclusions reached as a result of the study are provided. (DB)

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TOWARD MIDDLE-LEVEL MANPOWER EDUCATION

FOR COLOMBIA

A Report to USAID Colombia

By

B. Lamar Johnson

Bogotá, July 1974

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CONTENTS

		PAGE
I.	Preparation of Middle-Level Manpower: A National Need	1
II.	Preparation of Middle-Level Manpower: An Area of Concentration for USAID and for This Report	3
III.	Current Middle-Level Manpower Preparation Programs in Colombia	4
	A. Universities	4
	B. University Institutes	5
	C. SENA (National Apprentice Service)	6
	D. Industrial Schools	7
	E. Agricultural Schools (ITAS)	7
IV.	The University Institute	7
	A. The Concept of the University Institute	8
	B. The University Institute Today	10
	C. Assets of University Institutes	12
	D. Problems of University Institutes	13
V.	Recommendations for Middle-Level Manpower Education in Colombia	20
	A. Similarities Between Community College Problems in the United States and Those of University Institutes in Colombia	20
	B. Acceptance and Prestige: Number One in Priority	21
	C. Recommendations	22
VI.	Proposals for Assisting Middle-Level Manpower Education in Colombia Through USAID and Other United States Agencies	29
VII.	Conclusion	38

TOWARD MIDDLE-LEVEL MANPOWER EDUCATION FOR COLOMBIA

The purpose of this report--and indeed the purpose of my current assignment in Colombia--can be understood only by understanding the purposes and program of USAID in Colombia.

USAID aims to contribute to the development of Colombia economically, socially, and educationally. It proposes to do this by responding to needs identified by Colombia and to provide support for undertakings identified as important by Colombia. USAID is therefore currently in the process of securing from Colombian sources a statement of priorities for developmental needs in the nation that may help in planning future USAID activities.

I. Preparation of Middle-Level Manpower: A National Need

Education for middle-level manpower is recognized as a high-priority need in Colombia. Colombian government reports, reports by USAID, and reports of observers all point out that such fields as engineering, medicine, and agriculture have a wide gap between professional engineers, physicians, and agronomists and workers at low-skill levels.

Nothing said here implies that universities should minimize their role in research and in professional, theoretical, and humanistic education. Actually universities should continue to expand such roles. As a matter of fact, establishing effective middle-level manpower programs might (by relieving

universities of responsibilities some of them are assuming) actually aid them in expanding and strengthening their work in research and other scholarly pursuits.

As a consequence of the shortage of paraprofessionals, professional personnel are required to spend an inordinate amount of time on duties that could be performed equally well by middle-level manpower. This is a waste of professional manpower, and notably restricts needed services in business, technology, health, and agriculture. In many fields, a proper balance to ensure maximum development appears to be four technicians to each professional.

The term "middle-level manpower" does not really give proper recognition to the importance of the work of technicians nor does it properly define the nature of their work. Technicians are important, not only because they free the professionals for more theoretical work, but also because their work is important in itself.

Since the technicians' role is different, different abilities--different from those required for the professionals--are necessary. The programs for preparing technicians must use different criteria for selection from those for professionals. The educational programs will also be different, but should be of high quality and demand high-quality performance by the technician.

Government officials, educators, and other informed citizens in Colombia unite in pointing out that drastic changes in education will be necessary if enough young people are to be prepared for middle-manpower positions.

II. Preparation of Middle-Level Manpower: An Area of Concentration for USAID and for This Report

The problem and opportunity noted above are given high priority by Colombians as they identify the developmental needs of their nation. Accordingly, proposals for meeting the middle-manpower needs of Colombia rank high in the concern of USAID Colombia as it plans for the future.

During this assignment with USAID in Colombia, I have been asked to address myself to the problem of preparing middle-level manpower for the nation. In particular, I have been asked to examine the potential of the university institute for making a substantial contribution to this preparation.

In fulfilling my assignment I am drawing on my experience and work with the community junior college, for this institution is increasingly responsible for the preparation of middle-level manpower in the United States. I am also drawing on my background of service as a member of a University of California team in Colombia in 1964.[1/] In particular, however, I am drawing on my work and experience in Colombia during June and July 1964: conferences with Colombian government officials, educators, lay citizens, and students; conferences with USAID and U.S. Embassy personnel; visits to university institutes, universities, comprehensive high schools (INEM), SENA (National Apprentice Service) centers, agriculture schools, and industrial schools; and a study of books, reports, and documents on Colombia, its development, and its needs, particularly in education. Special mention should be made of the value of conferences and work with ICFES (Colombian Institute for the Development of Higher Education) personnel and also of the value of ICFES publications and reports.

1/ B. Lamar Johnson and James F. King. Report on the Possibility of University of California Participation in a Study of Higher Education in Colombia. Bogotá: USAID Mission to Colombia, December 12, 1964.

In this report the current status of middle-manpower educational programs will be noted, with extended consideration given to the university institute. Recommendations for improving middle-manpower education will be made and types of assistance that USAID and other United States agencies might give, particularly to university institutes, will be suggested.

III. Current Middle-Level Manpower Preparation Programs in Colombia

As noted above, Colombia has a great need for personnel at middle-manpower levels. Needs in this area have not, however, been completely neglected, for at least five different units of education are currently providing some (minimal though it may be) preparation for middle-level manpower positions: Universities, university institutes, SENA, industrial schools, and agricultural schools.

A. Universities

In Colombia the university as an institution has high prestige. It is rich in tradition and its programs in academic and professional fields are held in high esteem. Universities are typically undergraduate institutions. A number of universities offer "short programs," two or three years in length, to prepare middle-level manpower. Actually, however, courses in some such programs may be similar to those offered during the first years of professional programs, and do not prepare students for employment in middle-level manpower positions. Those who take these university programs are therefore less likely to be <u>effectively trained paraprofessionals</u> than to be <u>partially trained professionals</u> who did not complete a full course.

In medicine and dentistry, the University of Valle is an exception to the pattern described above. At Valle, a team approach to medicine and dentistry is made under which students are specifically trained for middle-level positions where

personnel work directly and cooperatively with physicians and dentists. Special mention should also be made of the University of Cúcuta, which includes a university institute within its organizational structure. Short career programs at Cúcuta include architectural drafting, electro-mechanics, and nursing.

Because most universities concentrate on programs that lead to degrees, preparation for middle-level manpower positions may receive only tangential attention. On the other hand, when institutes are integral parts of universities--with directors of short programs recognized as high-level administrators and with the active support and leadership of rectors, as is the case at Cúcuta--universities can provide high-quality middle-manpower education. In such situations, the prestige universities have in Colombia can help in achieving prestige for short programs.

Universities can stimulate and provide leadership for the development of middle-level manpower education programs in other institutions. They can also, under conditions outlined above, educate sizable numbers of paraprofessional personnel themselves.

B. University Institutes

University institutes are postsecondary educational institutions that offer programs of up to three years designed specifically to prepare students for middle-level manpower positions. Some institutes are public; others are private. All, however, are under the supervision of ICFES.

As projected by ICFES, institutes are essentially vocational, although some general education is included in their programs. Institute programs vary in length from two to six semesters. Offerings are planned to meet the middle-level manpower needs of Colombia, and particularly the needs of the regions where the institutes are located. ICFES is projecting an extensive nationwide development of university institutes, so located as to serve all regions of Colombia.

Since university institutes are specifically designed to provide middle-level manpower education (that is, of course, the

focus of this report), since a nationwide development of these institutes is projected, and since many community college developments in the United States (my field of special competence) appear to be relevant to plans for institutes, university institutes will be discussed at greater length later in this report.

C. SENA (National Apprentice Service)

SENA is a national educational agency that prepares students for skilled and semi-skilled positions in a wide variety of fields. It both trains students for initial employment and provides continuing education for adult workers. Although SENA provides training in many different occupations, it concentrates on programs in technology, agriculture, commerce, and services. SENA also provides guidance and placement services and engages in studies of human resources and manpower needs.

In working closely with industry, SENA has discovered that technician programs are necessary. Accordingly, it is offering in some of its centers programs that require students to be high school graduates. These then are quite parallel to the short programs offered in university institutes or universities.

Nationally, SENA is organized into regions, each with its own director. The Director General of SENA is appointed by the President of Colombia and is directly responsible to him. Since SENA programs are largely restricted to major cities, much of the nation is, and is likely to remain, untouched by SENA.

SENA is supported by a two-percent payroll tax levied on all employers whose businesses have an annual income of more than 50,000 pesos or who have ten or more employees. This provides generous support and makes it possible for SENA to employ highly qualified personnel and to provide excellent plants and facilities. Centers I have visited are well maintained and are apparently providing effective instruction.

The important role of SENA--both actual and potential--must indeed be recognized in middle-level manpower education in Colombia.

D. Industrial Schools

Industrial schools are designed to prepare students for employment in industry. They offer programs in such fields as machine shop, electricity, and industrial electronics.

These schools are largely high schools. Many of their programs extend, however, for a year or more beyond high school. Representative of such schools is the Institute of Technology and Industry in Cali. In this school, a year of postsecondary education is included in a four-year curriculum that includes three years of technical-vocational education in high school and one year of it at the postsecondary level.

By virtue of some of the advanced work done in industrial schools, these institutions must be recognized as agencies that provide at least some education for middle-level positions. It is my impression, however, that the programs offered by these institutions are almost entirely limited to high-school-level instruction. More industrial schools may in the future extend their programs to the postsecondary levels that are required for preparing personnel for middle-level manpower positions.

E. Agricultural Schools (ITAS)

The technical-agricultural schools aim to prepare students to work in agricultural occupations, including soils, crops, and animal husbandry. Like industrial schools, they are largely secondary schools, but extend beyond high school for one year.

IV. The University Institute

Earlier reference has been made to the university institute, a postsecondary educational institution that offers programs of up to three years, designed to prepare students for middle-level manpower positions. In the more extensive discussions that follow, the concept of the university institute will be covered, their status (including some of their assets) will be noted,

and selected important problems associated with them will be identified.

It should be noted that university institutes are both private and public, and also that an institute may be a separate institution or it may be associated with another educational institution--a university, for example.

A. The Concept of the University Institute

The general level (a postsecondary educational institution offering programs of up to three years) and the purpose (to prepare students for employment in middle-level manpower positions) have been noted. Under the joint leadership of ICFES (the controlling, regulatory, and funding agency for higher education in Colombia) and of ACIET (the Colombia Association of Technological Institutes), plans, proposals, and policies for institutes have been studied extensively and discussed widely. General problems and difficulties associated with developing institutes have been noted and general policies for institutes have been formulated and agreed upon.[2/]

The concept of the university institute can perhaps be best understood by noting the following characteristics that have been projected for these institutions:

1. University institutes are postsecondary educational institutions
2. Admission to institutes is restricted to high school graduates
3. Requirements for admission to institutes are more flexible than those for universities
4. Institutes offer educational programs that prepare students for employment in middle-level manpower positions

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2/ Base para un Plan Nacional de Desarrollo de la Educación Tecnológica, 1972-1978. Segunda Edición Revisada (Octubre de 1973). ICFES, Bogotá.

5. Institutes offer programs of varying lengths (ranging from one to six semesters) depending on the nature of the position for which preparation is given
6. Programs offered by institutes are largely based on the employment needs and opportunities of the regions in which they are located
7. Programs offered by institutes are also based on the needs of the nation
8. A nationwide plan for the development of institutes is projected so that, as far as possible, opportunities for short programs will be available in all sections of the nation
9. Programs offered by institutes are practical and directly applicable to positions for which preparation is offered
10. On-the-job experience is encouraged as a part of the curriculum
11. General education, along with vocational education, is an integral part of the curriculum
12. In selecting faculty members, preference is given to those who have had successful employment experience in positions for which they will be offering instruction
13. Credit for courses taken in institutes may be transferable to professional curricula in universities
14. Institutes seek to develop and use new methods of teaching that will increase and vitalize student learning and involve students in active learning situations[3/]

3/ The characteristics of university institutes listed here are drawn from official reports, supplemented by statements of government and educational officials with whom I have conferred.

Obviously and admittedly, the concepts outlined above represent not an achievement, but a goal, a goal well worth striving for at the highest levels of the nation. They represent a goal, defined by Colombians, to the realization of which friends of Colombia (including the United States through USAID and the contributions of colleges, universities, foundations, and other agencies) can appropriately commit themselves.

B. The University Institute Today

The reality of the university institute in Colombia today is starkly different from the concept of these institutions that we have noted above. There is currently no nationwide system of institutes. Although a sizable number exist, only a few have acceptable facilities and even fewer offer programs consistent with the concepts Colombians have for their institutes. Even the best of today's university institutes fall far short of the ideals Colombia must have for them if they are to realize their full potential.

Colombia today has 19 officially recognized institutes, of which 13 are public institutions and six private. In addition, 15 institutes are now seeking official recognition (four official and 11 private). It should be observed that many of them are university institutes in name only. Someone has suggested that in Colombia it is easier to establish a university than to start a kindergarten. Perhaps this analogy can be carried a step further and suggest that in Colombia it is easier to start a university institute than to start a nursery school.

All of this points up the fact that standards for university institutes are virtually non-existent in Colombia today. It should be observed that ICFES has the authority to establish standards for university institutes. It hopes soon to have authority to close institutions that fail to meet these standards. (It should be noted that ICFES has asserted its authority over universities by closing twelve institutions that aspired to university status without meeting the minimum requirements set by ICFES.)

The current condition of many university institutes was, to a degree, clarified and dramatized for me during a visit to a city with a distinguished university and several university institutes. While I was conferring with the rector of the university, I asked his opinion of university institutes and, in particular, inquired into his possible interest and that of his university in cooperating with these relatively new institutions. The rector believes that university institutes are needed in Colombia; he believes that the rationale and the underlying philosophy of them is sound; he further believes that they can have an important place in Colombian post-secondary education. He vigorously disclaims, however, any interest in having his university work with university institutes as they are presently constituted. "They are," he asserts, "a mess--institutions with low or totally non-existent standards."

The rector, on the contrary, expressed an active interest in a possible working relationship with SENA, an agency that, he points out, is well financed, has impressive programs and facilities, and has highly qualified personnel.

Following my visit with the rector, I had an opportunity to observe what the rector had in mind when he referred to the university institute situation as "a mess." After leaving him, I visited a university institute that was indeed a "sad institution." It was housed in a tiny slum-like building (though by no means located in a slum-like environment), with perhaps five or six totally inadequate (ill-kept, shabbily furnished, poorly lighted) classrooms. One class was in session. Neither the rector nor his secretary was present, but I was given to understand that he "stops in upon occasion."

After leaving this so-called university institute, I was driven past a private university institute (apparently a proprietary institution operated for profit) with blatant storefront advertising that promised high-quality preparation for

careers in business. This was again an institute with an "unthinkable plant" that clearly belied its advertised claims and promises.

These two institutes are not, of course, completely representative of university institutes in Colombia, for some have relatively adequate staff, facilities, programs, and educational leadership. The question might appropriately be raised, however, of whether these two institutes (and I fear many others in like condition) should be permitted to continue in operation. By no stretch of the imagination can they be said to meet minimum university institute standards. Their continuing existence can only accentuate the problem the university institute has of achieving prestige. Such institutions indeed contribute to the "mess" designation given by the rector.

C. Assets of University Institutes

Against this background on the current status of university institutes, it is important to note some of the assets and some of the problems of these institutions. The following are among the assets of university institutes.

1. The programs of university institutes are addressed to a major national need: the education of middle-level manpower. This emphasis provides a valid foundation (1) for developing sound, greatly needed educational programs, and (2) for a campaign on which institutes can be "sold" to the nation, its government, its citizens, its students, and its educators.

2. A sound conceptual basis for institutes and their development has been formulated and published. Most importantly, ICFES has accepted the formulation developed under its leadership and that of the Colombia Association of Technological Institutes. As the central government agency in higher education, ICFES has financial resources and regulatory power. It can and does exert influential leadership on all higher education in Colombia.

3. ICFES has committed itself to taking leadership in the development of university institutes throughout the nation. Evidence of this commitment is provided by the organization, within ICFES, of a division of short-program higher education. This division is providing leadership in the development of university institutes. It is anticipated that its staff and facilities will be expanded as university institutes assume a role of continually increasing importance in postsecondary middle-level manpower education.

4. The Colombia Association of Technological Institutes is committed to the sound development of university institutes throughout the nation. Composed of rectors of university institutes, this relatively young (it is less than two years old), but influential organization works closely with ICFES in providing leadership in the development of university institutes. The Association has apparently been fortunate in the quality of its officers through whom much of its leadership is provided.

5. Existing university institutes have a nucleus of potential educational leadership for university institutes in Colombia. Some of the administrators and other staff members in university institutes are men and women of high ability with obvious potential for important educational leadership. An increasing number of them are coming to understand and accept the role, function, philosophy, and potential of the university institute.

D. Problems of University Institutes

In the pages that follow, some of the major problems of university institutes will be identified and discussed. An understanding of these problems will help account for many of their current weaknesses. Such an understanding can also provide a basis for formulating recommendations designed to strengthen university institutes and help them achieve their full potential.

1. Youth. An obvious problem of university institutes is associated with the recency of their establishment. University

institutes have a history of less than a decade in Colombia. The Colombia Association of Technological Institutes was not organized until 1972 and ICFES has only recently established an administrative division of short programs. It is obviously unrealistic to expect university institutes, in less than ten years, to achieve standards of excellence and prestige comparable with those of universities, which in Colombia have had a history of some three centuries. As the problems and difficulties of university institutes are identified and discussed, it is important to keep in mind that many of them are largely due to their recent establishment.

2. Lack of acceptance of short programs. As I have visited university institutes, I have had an opportunity to meet with groups of students in various sections of the nation. In every case, a large majority of the students looked upon short programs as only the beginning of their postsecondary education. Long-term employment in middle-level occupations seems to have little attraction for them. Even less attractive is the prospect of employment in low-level occupations for which many of them believe they are destined--even after the completion of three-year postsecondary short career programs. Accordingly, most students (at least those whom I met) hope to work for a time and then continue their education, looking forward where possible to preparation for and entry into a profession.

3. Difficulty of placing university institute graduates in middle-level manpower positions. As noted earlier, there is in Colombia a wide, unfilled gap between high-level professional positions and low-skill operational posts. As a consequence, professional personnel spend too much time in duties that could equally well be performed by middle-level manpower. Another consequence of this gap is inadequately trained low-skill workers attempting (and too often failing) to perform duties that should be assumed by competent middle-level manpower personnel.

This situation, as official government reports repeatedly point out, is detrimental to the economy and to the development of the nation. University institutes are designed to help meet this problem by offering short career programs that will prepare students to fill the gap between professional and low-skill personnel.

With this background, one would assume a heavy demand for graduates of university institutes. With few exceptions, however, this is not the case. Graduates report difficulty (and students anticipate difficulty) in finding middle-level positions in the fields in which they are prepared. Employers either have no positions to offer or have positions in which they hope to employ institute graduates at salaries commensurate with those paid to low-skill personnel.

4. Inability to transfer to universities credit for work students take in university institutes. Short programs are planned to prepare students for employment, but some few students should perhaps continue their work in a university. Provision should therefore be made for transferring to universities credit for some university institute courses.

Currently in Colombia it is usually impossible for a student to transfer credit from an institute to a university. This inability to receive university credit for work done at an institute is a matter of great concern to some of the students with whom I visited. This situation also undoubtedly leads some young people to decide not to attend a university institute. This total problem is doubtless accentuated by the fact that the quality of instruction is low in too many institutes.

5. Pressure to convert university institutes into full-fledged universities. Because the universities have prestige and because university institutes currently have little, if any, the staff personnel and students in institutes, as well as citizens of communities in which institutes are located, often urge that institutes be converted into universities. My attention has been called to two institutes in which "conversion movements" are well

advanced and, in my visits to several institutes, staff members (and particularly students) have suggested that their institutes be converted into universities. It is difficult indeed to provide an effective educational program in an institution in which both staff and students find the basic institutional objectives uncongenial and inconsistent with their personal goals and aspirations.

It should be noted that this "conversion pressure" is not unique to Colombia. In the early history of the community college movement in the United States (and in some situations even today) communities have exerted pressure to convert two-year colleges into four-year institutions.

6. Lack of community involvement in and community support of university institutes and their programs. In visiting university institutes and in conferring with staff members, students, and lay citizens, I have found few examples of community involvement in program planning and operation. On occasion it appears that institute officials confer with employers regarding the possibility of offering programs designed to prepare students for positions in their particular fields. In no case, however, have I found formally organized lay advisory committees who work with faculty members in the planning, operation, and evaluation of career programs.

I fear that too often university institutes are "dropped" into communities with little effort made to involve citizens in planning the institute and in participating in its operation. In no sense have I gained the impression that local citizens take pride in a university institute as "our institute."

In some situations, I note that institute rectors and other high officials do not even live in the communities their institutes serve. Some commute to and from their work for distances of up to 75 or 100 kilometers. It is difficult to understand how a university institute can be a true "community institution" when it is administered by an "absentee leadership."

7. Lack of ample qualified administrative personnel. The character and quality of any institution in large measure depends on the character and quality of its administrative leadership. Highly qualified administrative leadership is obviously essential if university institutes are to achieve their full potential in Colombia.

Greatly needed in university institutes are more rectors and other administrators with a capacity for leadership, and an interest in and the ability to involve faculty members, lay citizens, and students in the development of a truly community institution. An understanding of and enthusiastic commitment to the philosophy and concept of the university institute are essential for the leadership these institutions must have. Leadership of the quality university institutes must have is indeed in short supply in Colombia.

8. Lack of qualified teaching personnel. There is general recognition that a "special breed" of teachers is necessary for university institutes. Most university professors would not meet the requirements of short career programs, for they are typically too theoretically oriented. Similarly high school teachers are rarely qualified to teach in short career programs, for their preparation is not at a sufficiently high level to meet the expectations of postsecondary institute students. Particularly needed are teachers who have been successfully employed in the paraprofessional fields in which they are teaching. Such faculty members must know how to teach and must also be able to adapt their instruction to the requirements of employers in the community. Such personnel are in short supply in Colombia.

9. Lack of sound plans for explaining "short programs" to students, to staff members, and to the public. The lack of acceptance of short programs is in part a result of failure to explain and even to sell such programs by university institute personnel. Highly motivated leaders--almost missionaries--are needed to campaign for the concept of short programs and to develop high-quality programs.

10. Terminology. The problem of how to designate the institution commonly referred to as "university institute" has not yet been resolved. Some object to the term "university institute," for they suggest this seems to "tie the institute" to the university and this, they assert, is undesirable. The new institution, they urge, should have an identify of its own. Others hold that the university designation has value in that it relates the new institution to that long-established prestigious institution, the university.

Also under discussion is the use of the term "middle-level manpower." Those who question its use suggest that "middle-level" is in no sense a prestigious term and that a more prestigious term is needed.

11. Financial support. Providing adequate financial support for university institutes is both difficult and important. If qualified personnel are to be attracted to institutes, adequate and, indeed, attractive salaries must be paid. Similarly, if high-quality instruction is to be offered, efficient plants and facilities must be provided. In addition, of course, funds must be available to pay for administrative and operational costs. It should be noted that the cost of offering instruction of the type required in university institutes is significantly higher than that in academically-oriented institutions. The costs of teaching courses in technology and health care are, for example, notably higher than in history and Spanish.

12. Relationships with SENA. Earlier in this report, SENA and its contributions to middle-level manpower education have been discussed. Particular mention was made of the financial support SENA has and of the consequent quality of its staff and facilities. In this connection, note should be taken that the high quality of SENA operations is sometimes in distinct contrast to the low quality of university institute operations.

Those parts of SENA's operations that are at the postsecondary level duplicate to a degree those of university institutes.

There is, therefore, in Colombia a long-established, generously supported educational agency--SENA--that is offering education for middle-level manpower positions; concurrently there is in Colombia a new and inadequately supported educational agency--the university institute--that is also offering education for middle-level manpower positions.

It seems important for SENA and university institutes to work together in identifying their respective responsibilities, in avoiding unnecessary duplication of services, in sharing facilities. Little such cooperation has yet been achieved. Nor is there evidence that any plan for achieving any is in process.

In a very real sense, the problem of cooperation with SENA may be a threat to the very existence of university institutes. In a nation with the limited financial resources of Colombia, the question might appropriately be raised of whether the nation can afford both SENA and university institutes. In the event of a show-down on such an issue, SENA, with its generous, assured, and increasing financial support, might well have a distinct advantage over the fledgling university institute.

13. Relationships with other units of education that prepare middle-level manpower personnel. Relationships with SENA have been discussed at some length because of the unique character of this agency and because of the scope and nature of its programs. Problems of relationship with other agencies that offer middle-level manpower education must also be recognized. Problems of transfer from university institutes to universities have been noted. Similarly, problems of transfer from industrial schools and agricultural schools to university institutes must be recognized.

14. Translating the theory of the university institute into action. Under the leadership of ICFES and of the Colombia Association of Technological Institutes, a sound concept of the university institute--a concept realistically addressed to the

middle-level manpower needs of Colombia--has been formulated. The major overall problem confronting university institutes in Colombia is that of translating this theory into action. This problem actually embraces almost all the problems noted and discussed above. It is to this major problem that the next two sections (V and VI) of this report will be addressed.

V. Recommendations for Middle-Level Manpower Education in Colombia

As I review the problems of university institutes in Colombia, I am impressed by the fact that most are not unique to Colombia. They are for the most part, and in varying degrees, nearly identical to problems confronting similar institutions throughout the world.

In the pages that follow, I shall particularly note similarities between the problems of community colleges in the United States (because of my long association with them) and those of university institutes in Colombia. Like statements might be made regarding middle-level manpower educational institutions in many nations of the world.

A. Similarities Between Community College Problems in the United States and Those of University Institutes in Colombia

In the United States, the community college has had difficulty in achieving acceptance by the public, by universities, by students, and by its own faculty members; it has in many communities been under pressure to become a senior college (a full-fledged, degree-granting institution); it has had difficulty in transferring to universities credit for work done in community colleges; it has had difficulty in securing qualified teaching and administrative personnel; it has had problems of terminology--whether this institution should be designated "junior college" or "community college" or whether some other designation should be used; and it has had difficulty in securing adequate financial support.

In this Section V of this report (concerning recommendations for middle-level manpower education in Colombia) and in the following Section VI (concerning proposals for assisting middle-level manpower education by USAID and by other United States agencies), I propose to draw on the experience we in the United States have had in dealing with community college problems basically similar to those of university institutes in Colombia. Since we are still working on many of these problems, I hope that we (in the United States) can draw on Colombian experience, just as I hope that Colombia can draw from our experiences and from other countries.

It should be noted that on occasion a problem can be converted into an advantage and an asset for an institution. I have in mind, for example, the recent establishment of these institutions, which I have earlier referred to as a problem for them--which indeed it is. This has also been a problem for the short-program institutions throughout the world. On the other hand, youth can have some advantages. We find in the United States that, as a relatively new institution, the community college is unhampered by the heavy hand of tradition that often restricts the launching of new plans and development in tradition-oriented universities. As a matter of fact, educational observers often refer to the community college as the most fertile unit of education for innovation in the United States. Its youth is clearly a factor in encouraging the development of new educational strategies in community colleges and is putting many of these institutions in the forefront of innovative educational leadership. Youth may also very well prove to have an advantage for university institutes in Colombia, helping make it possible for them to break with tradition and to give leadership in launching important new educational strategies for education at various levels throughout the nation.

B. Acceptance and Prestige: Number One in Priority

The university institute is currently "low man on the post-secondary educational totem pole" in Colombia. It is low in

prestige; it is low in acceptance; and too often it is low in the quality of its programs. Government officials and educational leaders in Colombia and students and staff members in institutes with whom I visited unanimously urge that achieving acceptance and prestige is of first importance ("number one priority") if the university institute is to achieve its mission, and if it is to improve its position on the "postsecondary educational totem pole." Accordingly, in the pages to follow, I shall present recommendations for improving the image and acceptance of the university institute.

In making recommendations, I am keeping in mind that acceptance and prestige can be merited and achieved only if institutes have sound programs based on and consistent with the concept of them that has been so well formulated and enunciated under the leadership of ICFES and of the Colombia Association of Technological Institutes.

C. Recommendations

Against this background of need and opportunity, I shall make seventeen recommendations for the consideration of government and educational personnel in Colombia. It will be noted that these recommendations on middle-level manpower education deal largely with university institutes, since this is the institution with which I have been particularly concerned during my weeks in Colombia. I am, of course, aware of the services of other Colombian agencies (in fact I have discussed them in an earlier section of this report) in middle-level manpower education, and recognize the importance of coordinating the efforts of all agencies that address themselves to this level of education.

1. <u>Provide educational programs relevant to the needs of the community where each institute is located</u>. If the university institute is to fulfill its mission, it must offer programs that prepare students for employment in middle-level manpower positions in its community. In some communities, this will include offerings in agriculture. In others, programs will be needed to

prepare personnel in one or more fields such as electronics, business, fisheries, health, architecture, and engineering.

All possible steps should be taken to make certain that middle-level manpower personnel are really needed in a community in each field in which a program is offered. Priorities of need should be established for deciding on particular programs to be offered in an institute.

2. Provide educational programs relevant to the needs of the nation. In selecting programs to be offered in university institutes, priorities of national needs should be considered along with community needs. Officials of ICFES, along with those of the Colombia Association of Technological Institutes, should be of particular help in coordinating information regarding national needs for use by institutes.

3. Involve lay citizens of the community in program planning and operation in each university institute. If university institutes are truly to become community institutions, lay citizens must take an active part in deciding what programs to offer and what to include in them--based, for example, on abilities that employers expect students to have when they graduate and are on the job. Lay citizens can also take an active part in instruction by meeting with classes and by arranging student field trips to centers of employment.

Since employers must understand the values of and procedures for training middle-level manpower before they can make an optimum contribution to the development of short career programs, an educational program for employers will often be necessary.

Lay advisory committees (if possible, one for each program offered) can be helpful in providing continuing advice and assistance in planning, developing, offering, and evaluating each program.

4. Establish operational standards for university institutes in Colombia. Earlier reference has been made to university institutes with totally inadequate faculties, facilities, and

programs. These institutes are currently making it impossible for university institutes to achieve prestige or even a minimum acceptance within the nation. If institutes are to fulfill their mission, they must have high-quality programs consistent with their objectives and with the needs of their students, their communities, and the nation.

University institutes must maintain high standards of excellence if they are to achieve respectability. If this is to be achieved nationally, standards of excellence must be formulated, accepted, and disseminated as a basis for institutional development. Such standards, which should be developed under the leadership of ICFES and the Colombian Association of Technological Institutes, should be based on the concept of university institutes, as described by ICFES in its publications on them.

5. Evaluate each university institute on the basis of the standards referred to above. It is not enough to formulate, agree upon, and disseminate standards for university institutes. If they are to have value, they must be applied to and used as a basis for evaluating individual institutes. Working in cooperation with the Colombia Association of Technological Institutes, ICFES would appear to be the appropriate agency for using the standards in evaluating every university institute in the nation.

6. Take steps to close university institutes that fail (when evaluated) to meet the required standards. If, after standards have been accepted and imposed by ICFES, a university institute fails to meet them, it should be closed. ICFES soon anticipates receiving authority to take such action. ICFES has acted this way with a number of universities that have failed to meet university standards. ICFES will undoubtedly take similar action in the case of institutes when it has authority to do so. Only if institutes with low standards lose the designation "university institute," will university institutes really be accepted in Colombia.

Institutes should be warned, of course, before they are closed and should have an opportunity to strengthen their programs in areas of weakness. Proper provision should also be made for any students affected by closures.

7. Offer more middle-level manpower education programs in universities. The universities' prestige has potential value in aiding middle-level manpower education programs to achieve acceptance. If the rector and other central administrators in a university have an enthusiastic interest in and commitment to middle-level manpower education, effective university programs might well be developed. Possibly a pattern might be used that is somewhat similar to the one developed at the University of Cúcuta, where university institute (or short) programs are offered within a special administrative unit of the university.

8. Provide programs for preparing administrators for university institutes. The future of university institutes in Colombia will in large measure depend on the quality of their administrative leadership. Currently qualified administrators for university institutes in Colombia are in short supply--and are greatly needed. It would be highly desirable to establish at least one university (eventually perhaps two or three) program for preparing administrators for university institutes. Such a program should include a study of the philosophy and operation of university institutes and of the principles and practices of administration. It is important that such a program include in-service education for present administrators of university institutes. The provision of such a program (or programs) will give universities an opportunity to furnish important leadership for university institutes.

9. Provide programs for preparing teachers for university institutes. Qualified teachers for university institutes are greatly needed and are in short supply in Colombia. Programs, both pre-service and in-service, should be provided. Included

in such programs must be plans for attracting as teachers men and women who have been successfully employed in the middle-level manpower positions for which preparation is provided in institutes. Teacher preparation programs should, of course, provide instruction in principles and practices of teaching.

The cooperation of university institutes, of employers, and of universities would be needed in developing and providing programs of teacher preparation.

10. Take steps to provide effective student personnel services in university institutes. Student personnel services are greatly needed in university institutes. Such services should develop close working relationships with secondary schools as an aid to recruiting and selecting qualified students for institutes. Students greatly need counselling and guidance to help them select courses and programs appropriate for them, keeping in mind the selection of offerings to prepare students for positions in which employment is available. In this connection, placement services for students are also needed.

11. Take steps to enable credit to be transferred from university institutes to universities. The fact that credit for work done in university institutes cannot be transferred to universities is of great concern to many students. Although it is clear that not all, or even most, university institute credit should be transferable, policies can be established under which some credit can be transferred. A few institutes already have joint agreements for some transfer of credit between selected universities and selected university institutes.

12. Expand the short-program staff and facilities of ICFES to make it possible for ICFES to provide necessary regulatory and leadership services to university institutes. The responsibilities of ICFES, some of which are noted in this report, for regulating and for providing leadership to university institutes are awesome indeed. The short-program staff and

facilities of ICFES must clearly be expanded if it is to meet them all.

13. Take steps to provide a professional staff and a national headquarters for the Colombia Association of Technological Institutes. The leadership the Colombia Association of Technological Institutes has provided in the development of university institutes has been notable. The work of the Association has, up to the present, been carried out by volunteer personnel, including particularly elected officials of the Association. If university institutes are to be effective, the leadership and the service of the Association, working with ICFES, must be expanded. Such expansion will clearly require a professional staff and national headquarters.

14. Take steps to coordinate the services of all agencies that provide middle-manpower education in Colombia. As noted earlier, several agencies, each under the authority of a different unit of the national government, offer middle-level manpower education in Colombia. In the interest of efficiency and economy, it is important that the work and services of these agencies be coordinated. Because these agencies are responsible to different units of the national government, it is likely that effective coordination can be achieved only through the intervention of the national government at the highest level. Until this takes place, a degree of coordination can perhaps be achieved on a voluntary basis as agencies work together.

15. Consider changing the designation of university institutes to one more acceptable, and more descriptive of the role and function of these institutions. As noted earlier, the designation "university institute" is not universally accepted. This is a situation about which Colombians would be much more sensitive than I, as only a visitor to Colombia. I suggest, however, that consideration be given to another designation, one which would perhaps aid these institutions to achieve an identity of their own.

16. Take steps to encourage the development of sound innovative practices designed to improve varied aspects of the operation of university institutes. As noted earlier, the fact that university institutes are new gives them the advantage of being relatively unhampered by the heavy hand of tradition, as is the case in most universities. This situation gives university institutes an opportunity to launch new types of educational strategies--innovations in instruction, in curricular organization, and in student personnel services, for example. Through taking leadership in developing innovations, university institutes may eventually influence developments at all levels of education in Colombia.

17. Establish several model pilot university institutes. The establishment of model pilot institutions could have a notable leadership value in the development of university institutes nationally. They could also contribute notably to the acceptance of university institutes and to their achievement of prestige. Model pilot universities should, of course, be planned and launched with great care. They should demonstrate best practices in community-centered middle-level manpower education. Model pilot institutes should be located where they can be of greatest leadership and demonstration value.

All these recommendations emerge from my understanding of the interests and needs of Colombia as expressed by Colombians, particularly through the publications and reports of ICFES and the Colombia Association of Technological Institutes. If these recommendations are accepted, they must be recognized as recommendations by Colombians for Colombians. Likewise they must be acted upon by Colombians, including governmental and educational personnel and agencies.

There is, however, a possibility that agencies from outside Colombia can, at the request of Colombia, be of assistance in acting on some of the recommendations. In the pages that follow, a number of suggestions will be presented under which (at the

request of Colombia) USAID and other agencies might help to advance middle-level manpower education in Colombia.

VI. Proposals for Assisting Middle-Level Manpower Education in Colombia Through USAID and Other United States Agencies

It is clear that the ability and capacity to translate theory into action are major needs in middle-level manpower education in Colombia. Although plants and physical facilities are obviously important (and some of these are clearly inadequate), top priority must be given to developing operational procedures and to the upgrading of personnel.

It must be recognized that the proposals below are conditional only. They are conditional (1) on an expressed request by Colombian authorities, and (2) on the willingness and ability of American agencies to be involved in them.

Some of the proposals are reciprocal in nature, involving assistance not only from the United States to Colombia, but also from Colombia to the United States. As possible proposals are presently stated, they do, however, predominantly involve assistance from the United States to Colombia. It is to be hoped that, as proposals are considered and acted upon, the reciprocal nature of them can be expanded, with an increased recognition of the assistance Colombia can provide American education.

1. <u>Help establish a program for preparing university institute administrators</u>. With the assistance of foundation grants, universities in the United States, Canada, and Australia have established programs for preparing community college administrators. Such programs provide both pre-service and in-service education. They are developed cooperatively with successful administrators. In them, both university and community college personnel are involved in offering instruction. Internships in community college administration are important parts of many programs.

University programs in other countries can serve as possible models for a similar program specifically designed, however, for preparing university institute administrators in Colombia. In doing this, a sister relationship might be established between a university in Colombia and a university in the United States with a strong program for preparing community college administrators.

Because of the program's importance, and because of the cost of launching it, sources of special funding should be sought.

2. Assist in establishing one or more programs for the preparation of teachers for university institutes. One of the great needs of university institutes is an ample supply of qualified teachers. They must understand and accept the concept and philosophy of university institutes; they must be competent in the occupational or general education fields in which they teach; and they must know how to teach. Programs of preparation, both pre-service and in-service, might be developed cooperatively between and among universities, university institutes, and employing agencies. Internships in teaching should be an integral part of pre-service preparation. Workshops and seminars on teaching and on the role and function of university institutes should be provided for teachers who are already in service.

Special financial assistance might well be sought for planning and launching one or two pilot programs of teacher preparation.

3. Develop a program to teach employers (including business, industry, government, and professional groups) the values and the methods of using middle-level manpower in Colombia. Although Colombia (as has been repeatedly noted in this report) has a great need for middle-level manpower, there are currently few jobs for personnel prepared for positions at this level. Graduates of university institutes find difficulty in securing employment and institute students are greatly worried at the

prospect of being unable to secure positions in the fields and at the level for which they are prepared.

This paradoxical situation is due largely to the fact that employers do not know how to use middle-level manpower. They have fallen into a pattern of assigning middle-level duties to professional personnel. Sometimes unskilled personnel are assigned to middle-level duties--and carry them out inefficiently.

Various plans might be used in educating employers to the values of and procedures for using middle-level manpower. These could include pronouncements by prominent national leaders, newspaper and magazine articles, and radio and television programs and announcements. Also, a series of seminars on the use of middle-level manpower in various fields (including technology, engineering, business, and health) could have a great value to the nation. Such seminars could emphasize the "how to" of using such personnel and could stress the monetary value (profit) of using middle-level personnel. In at least one city, such seminars have been sponsored by a university institute with apparently valuable outcomes.

Seminars could be held in any interested region, with the initial ones held perhaps in regions where pilot model university institutes are established. The outcome of seminars, that is, decisions of employers to establish middle-level manpower positions, could be used by university institutes as a basis for selecting fields in which to offer middle-level manpower educational programs. Leadership for such seminars could and should be provided by Colombians. Upon occasion, however, qualified personnel from other nations might be invited to participate in seminars.

It is to be hoped that special funding might be available for plans to educate employers to the values of and procedures for using middle-level employees. Such funding might be provided by ICFES, by a foundation, or perhaps by employers who would stand to profit most from them.

4. Provide opportunity for selected university institute personnel to serve as intern-observers in community colleges in the United States. Intern-observers with a high potential for leadership in university institutes should be selected. Community colleges in which they serve should be selected on the potential relevance of their programs to those of university institutes and in particular to the programs of institutes where the intern-observers serve.

Intern observers should be expected to contribute to the educational programs of the colleges to which they are assigned. An intern-observer should serve in a single community college for a period of several months with the expectation that he will have an in-depth educational experience and with the further expectation that he will make a substantial contribution to the educational program of the college. In view of the importance of establishing and maintaining standards in university institutes, some intern-observers might well serve in community colleges that are preparing for or are in the process of an accreditation examination.

5. Provide assistance that will make it possible for the Colombia Association of Technological Institutes to establish a national headquarters and to have a professional staff. If the Association is to provide the type of leadership needed by university institutes in Colombia, it must not depend entirely on the volunteer services of its elected officers. They are already heavily burdened with administrative responsibilities at their own institutions and cannot be expected to provide the time and continuity of leadership that will be expected of their national organization.

In the United States, the American Association of Community and Junior Colleges is providing service and leadership of inestimable value to community colleges. Similarly, in Canada, the Canadian Junior College Association is providing important leadership to the two-year colleges of that nation. Both of

these associations have received substantial foundation support for their programs and activities. Similar support should be sought for the Colombia Association of Technological Institutes.

6. Establish a clearinghouse center for literature on middle-level manpower education. Such a center could assemble, process (catalog, index, abstract), and disseminate significant middle-level manpower literature. The assembling, processing, and distribution of such literature could perform an important service to middle-level manpower education, not only in Colombia but in all of Latin America. I am told that a service somewhat similar to this is provided by ICFES for universities. The existing university agency might well cooperate with the proposed new clearinghouse, even provide some materials for it.

In the United States, service of this kind is provided by the Education Resources Information Center (ERIC) of the National Institute of Education, Washington, D. C. 20208. The ERIC center for community colleges is the ERIC Clearinghouse for Junior Colleges, Powell Library Building, University of California, Los Angeles, California 90024.

It may well be that the Clearinghouse for Junior Colleges could help launch a clearinghouse for middle-level manpower education in Colombia. It might also be possible to consider a plan of coordination between the Los Angeles Clearinghouse and the proposed new agency in Colombia, including the exchange and perhaps the translation of selected literature. It is clear that special funds would be required for such an undertaking.

Until and unless a clearinghouse service is provided in Colombia, educators in Colombia should know that the services of the ERIC Junior College Clearinghouse are available to them. Many publications (list available on request) of the Clearinghouse are available without charge. Subscriptions can also be entered (subscription blanks available on request) for New Directions for Community Colleges. Special requests for information about community colleges, addressed to the ERIC Clearinghouse for Junior Colleges, will be answered without charge. In

addition, subscriptions can be entered for Research in Education, a monthly abstract of reports on educational literature available from all ERIC Clearinghouses. Foreign subscriptions can be ordered for $47.50 per year from Superintendent of Documents, U. S. Gov. Printing Office, Washington, D. C. 20402.

7. Establish a "sister relationship" between several university institutes in Colombia and a like number of community colleges in the United States. University institutes selected for sister relationships should have high potential for important leadership in middle-level manpower education in Colombia. If model pilot university institutes are established--as I hope may be the case--in several regions of the nation, these institutions might appropriately become sister institutions. Community colleges that serve as sisters should have programs directly relevant to those of their sister institutes in Colombia. Great care should be taken in pairing colleges and institutes, both to assure that programs are relevant to each other and to assure that simpatico operational relationships are established between institutions.

Exchanges of personnel should take place under a sisterhood relationship. Such exchanges would be planned to benefit both university institutes and community colleges. Special sources of funding should be sought to finance the sisterhood programs.

8. Provide an opportunity for selected rectors of university institutes to study and participate in a program of community college management in the United States as a basis for deciding whether a similar program might be launched in university institutes in Colombia. In making this proposal, I have in mind a particular program of community college management that is attracting a good deal of attention in the United States. I refer to Project USHER, a program being carried out cooperatively by the League for Innovation in the Community College and by the Center for Improved Education of Battelle Memorial Institute, Columbus, Ohio. The program is supported by a substantial grant

from the W. K. Kellogg Foundation and by funds and services provided by League colleges and by Battelle.

Project USHER recognizes that management can be both scientific (management by objectives) and humanistic (participative management). It further recognizes that both kinds of management can exist concurrently in the same college. On this rationale, a model of community college management has been developed and put into operation in three pilot districts: Brookdale, New Jersey; Cuyahoga, Ohio; and Coast, California. As a consequence of its success and of the national attention Project USHER has attracted in the United States, a number of community colleges (in addition to those in the pilot districts) are adopting the USHER management model.

It would, I believe, be very valuable for selected rectors of university institutes (perhaps from three of the model pilot institutes recommended in this report) to study and participate in Project USHER by serving as observer-interns in Project USHER. Each rector should serve as an intern-observer for a minimum of two weeks at the headquarters of Project USHER in Columbus, Ohio. He should also serve as an intern-observer for from four to six weeks in one of the three pilot districts in which the USHER management model has been launched.

Efficient management is needed in university institutes just as it is in community colleges. The experience institute rectors could have in serving as intern-observers in Project USHER would, I am confident, have great value for them (and consequently for their institutes) as they become acquainted with advanced principles and practices of community college management in the United States. As a consequence of such acquaintance, one or more university institutes might wish to adopt the USHER management model. If so, steps could be taken to translate into Spanish the major publications and documents of Project USHER.

The proposal I am making might well eventually have a significant influence on the management of many institutes and indeed on the management of other units of education in Colombia. Special funds should be sought to finance the costs of the Project USHER intern-observer plan proposed here.

9. Establish an International Board of Advisors on the Development of Pilot Model University Institutes in Colombia. If the recommendation made earlier in this report to establish several model pilot university institutes is accepted--as I hope may be the case--major leadership for the development of these institutions must come from ICFES, particularly through its division of short-program education and from the Colombia Association of Technological Institutes. Leadership can also be provided through the coordinated efforts of the rectors of the model institutes.

In addition, if a plan of establishing a sister relationship between each model institute and a community college in the United States eventuates, representatives of the sister colleges can also be looked to for leadership.

To help provide coordinated leadership for the planning, development, and operation of pilot model university institutes, I suggest the organization of an International Board of Advisors on the Development of Pilot Model University Institutes in Colombia. Such a board should include representation from ICFES, from the Colombia Association of Technological Institutes, from the rectors of the model institutes, and from each sister college in the United States.

The Board should be under the chairmanship of a member of ICFES. A representative of sister colleges in the United States might serve as vice-chairman of the Board, with particular responsibility for coordinating the work and services of the sister institutions in the United States. The Board should have a full-time executive officer who would also serve on the staff of ICFES.

The work and leadership of the Board would be important to the effective development of university institutes in Colombia. Special funds should be sought to finance its activities.

10. Explore the possibility of establishing a continuing working relationship between university institutes in Colombia and a selected group of community colleges in the United States. This proposal would include, but would not be limited to, sister relationships of the type proposed earlier.

Working relationships would be sought to help develop sound educational innovations for university institutes. The field of efficient management (for example, Project USHER) is only one area of potential innovation. Particularly sought in working relationships with a selected group of community colleges might be opportunities for identifying sound instructional innovations that could be valuable for university institutes. On their recent visit to the United States, Fernando Mejía and Jordan Acero, for example, were much impressed with an example of self-paced instruction they observed at Central Piedmont Community College. It is their impression that this plan might well be adapted for use in university institutes in Colombia. Countless other examples of new developments in instruction in selected community colleges might be identified and considered for adoption by university institutes.

In making this suggestion for establishing a special working relationship with selected community colleges, I have in mind a particular group of colleges with which such a relationship might profitably be established. I refer to the League for Innovation in the Community College, a national organization of sixteen community college districts that aims, through cooperative work, to encourage and evaluate innovation and experimentation designed to improve varied aspects of college operation. Work of the League includes an emphasis on the improvement of instruction, on curriculum development, on the strengthening of student personnel services, and on improving management practices.

The membership of the League is comprised of sixteen highly selected college districts in eleven states. Since most League districts have more than one college, there are forty-four colleges in the League, with a total enrollment of more than 300,000 students, approximately one-eighth of the community college enrollment of the United States.

As a cohesive organization of highly selected community college districts that has been working together (with only minor changes in membership) for some six years, the League appears to be an appropriate organization for work with university institutes in Colombia. At the request of Colombian authorities, the possibility of establishing such working relationships as have been suggested could be explored with the Board of Directors of the League. Special funds should be sought to finance this proposal.

VII. Conclusion

Middle-level manpower education is clearly a major national need of Colombia, if it is to develop economically, socially, and educationally. Professional personnel in such varied fields as engineering, technology, agriculture, business, and health are spending a major amount (and in many cases most) of their time on duties that could be effectively performed by paraprofessional personnel. As a matter of fact, highly qualified paraprofessional personnel can often perform middle-level duties more effectively than professional personnel. An American friend of mine who lives in Colombia tells me, for example, that in Colombia a dentist cleans his patients' teeth--a function that, he assures me, could be performed equally well or perhaps more effectively by a well prepared dental assistant. Middle-level duties are not only performed by professional personnel, but they are also often attempted by unskilled workers who perform them laboriously and ineffectively.

This entire problem is accentuated by the fact that Colombia is losing some of its most eificient professionals to other countries. Many physicians who do not feel challenged by the semi-professional duties they are called on to perform in Colombia are going to other nations (including the United States), where their talents can be used at their professional level.

The solution of the problem is made more difficult by the fact that Colombians typically do not know how to use the services of middle-level manpower personnel--or even to understand the advantages (profit and efficiency) of using such personnel. I find, for example, a paradoxical situation in which graduates of short programs are unable to find middle-level positions in fields for which they have been prepared--and this despite the pressing need for semi-professional services in Colombia.

The total situation demands not only the provision of effective programs of middle-level manpower education, but also a program of education on the values and the how-to of using middle-level manpower.

In the body of this report, I have identified problems and opportunities in middle-level manpower education in Colombia. I have also made recommendations for strengthening and advancing it.

USAID aims to contribute to the development of Colombia economically, socially, and educationally. Clearly USAID and other interested United States agencies have an opportunity to do just this through contributing to the education and effective use of middle-level manpower in Colombia.

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